

Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for joining a blood conduit having a lumen, distal region, and proximal region, to a blood vessel having a wall, in a patient, the method comprising:
making an incision in the blood vessel wall;
inserting a tubular member comprising a tubular wall defining a lumen and having a distal region and a proximal region into the conduit, the tubular member distal region including a flow restrictor and a weakened wall region proximal of the flow restrictor;
advancing the tubular member distal region into the blood vessel through the incision and then expanding the tubular wall and the lumen of the tubular member distal region radially outward within the blood vessel by forcing oxygenated liquid under pressure through the tubular member to expand the weakened distal region;
fixedly joining the conduit distal region to the vessel wall near the incision while providing ~~an~~ the oxygenated liquid flow from an outlet of the tubular member disposed within the conduit and into the blood vessel; and
after fixedly joining the conduit to the vessel, withdrawing the tubular member through the conduit.
2. (Original) The method of claim 1, in which the inserting is performed before the advancing.
3. (Previously presented) The method of claim 1, in which the inserting is performed after the advancing.
4. (Original) The method of claim 1, in which the fixedly joining includes suturing the conduit to the blood vessel.
5. (Original) The method of claim 1, in which the blood vessel is a coronary artery, the conduit is a saphenous vein, and in which the fixedly joining includes fixedly joining the saphenous vein to the coronary artery.

6. (Original) The method of claim 1, in which the blood vessel is a coronary artery, the conduit is an internal mammary artery, and in which the fixedly joining includes fixedly joining the internal mammary artery to the coronary artery.
7. (Canceled)
8. (Canceled)
9. (Previously Presented) The method of claim 1, in which the oxygenated liquid includes blood.
10. (Previously Presented) The method of claim 1, in which the oxygenated liquid includes a non-blood oxygenated carrying substance.
11. (Previously Presented) The method of claim 1, in which the oxygenated liquid includes blood supplied from the patient's femoral artery.
12. (Previously Presented) The method of claim 1, in which the oxygenated liquid includes blood supplied from the patient's aorta.
13. (Previously Presented) The method of claim 1, further comprising retracting the tubular member within the conduit and further providing the oxygenated liquid through the tubular member to the conduit proximal region.
14. (Previously Presented) The method of claim 1, wherein the patient has a blood pressure, wherein the oxygenated liquid is provided at a pressure higher than the patient's blood pressure.
15. (Canceled)
16. (Canceled)

17. (Previously Presented) The method of claim 14, in which the liquid pressure is provided through a port into the tubular member that is distinct from the proximal end.

18. (Previously presented) The method of claim 1, further comprising inserting a stiffening member within the tubular member prior to inserting the tubular member into the conduit.

19. (Original) The method of claim 1, further comprising inserting a stiffening member into the tubular member.

20. (Original) The method of claim 19, wherein the advancing the tubular member into the blood vessel is performed while the stiffening member is inside the tubular member.

Claims 21-31 (Canceled).

32. (Currently Amended) A method for joining a blood conduit having a lumen, a distal region, and a proximal region, to a blood vessel having a lumen, a proximal end, and a wall, in a patient, the method comprising:

inserting a tubular member comprising a tubular wall defining a lumen and having a distal region and a proximal region into and through the conduit, the tubular member distal region including a flow restrictor and a weakened wall region proximal of the flow restrictor;

advancing the tubular member distal region into the blood vessel lumen through the blood vessel proximal end and then expanding the tubular wall and the lumen of the tubular member distal region radially outward within the blood vessel by forcing oxygenated liquid under pressure through the tubular member to expand the weakened distal region;

fixedly joining the conduit distal region to the vessel wall near the blood vessel proximal end while providing an the oxygenated liquid flow from an outlet of the tubular member disposed within the conduit and into the blood vessel; and

after fixedly joining the conduit to the vessel, withdrawing the tubular member through the conduit.

33. (Original) The method of claim 32, in which the inserting is performed before the advancing.

34. (Original) The method of claim 32, in which the inserting is performed after the advancing.

35. (Original) The method of claim 32, in which the fixedly joining includes suturing the conduit to the blood vessel.

36. (Original) The method of claim 32, in which the blood vessel is a coronary artery, the conduit is a saphenous vein, and in which the fixedly joining includes fixedly joining the saphenous vein to the coronary artery.

37. (Original) The method of claim 32, in which the blood vessel is a coronary artery, the conduit is an internal mammary artery, and in which the fixedly joining includes fixedly joining the internal mammary artery to the coronary artery.

38. (Canceled)

39. (Canceled)

40. (Previously Presented) The method of claim 32, in which the oxygenated liquid includes blood supplied from the patient's femoral artery.

41. (Previously Presented) The method of claim 32, in which the oxygenated liquid includes blood supplied from the patient's aorta.

42. (Previously Presented) The method of claim 32, wherein the patient has a blood pressure, wherein the oxygenated liquid is provided at a pressure higher than the patient's blood pressure.

43. (Canceled)